

MCAT

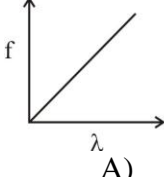
FULL LENGTH PAPER-1

AS PER UHS PATTERN

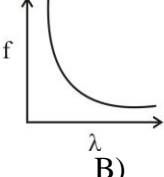
Total MCQs: 220
Max. Marks: 1100

Time Allowed: 150 Minute

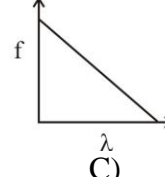
PHYSICS

- Q.1** $\frac{\text{Energy}}{\text{Mass} \times \text{length}}$ is equal to
 A) acceleration
 B) force
 C) power
 D) work
- Q.2** Which pair is different in nature?
 A) Displacement: velocity
 B) Force : K.E
 C) Momentum: velocity
 D) Power: speed
- Q.3** A merry-go-round is being enjoyed by the children in a calm and pleasing state with no jerks whatsoever. This system is in
 A) equilibrium
 B) rotational equilibrium
 C) translational equilibrium
 D) not an equilibrium state
- Q.4** A solid sphere of mass m is descending vertically at constant speed in water, which relationship is correct?
 A) Weight < up thrust
 B) Weight < drag
 C) Weight = drag
 D) Weight > up thrust
- Q.5** If the absolute temperature of gas is tripled, then the rms velocity of gas molecules will become
 A) 3 times
 B) $\sqrt{3}$ times
 C) 9 times
 D) $\frac{1}{3}$ times
- Q.6** Viscosity is the property of
 A) Liquid only
 B) Solid only
 C) Liquid and gases
 D) Solid and liquid
- Q.7** The height of water level in tank is H . The range of water stream coming out of a hole at depth $H/4$ from upper water level will be
 A) $\frac{2H}{\sqrt{3}}$
 B) $\frac{\sqrt{3}H}{2}$
 C) $\frac{H}{3}$
 D) $\sqrt{3}H$
- Q.8** Longitudinal waves cannot travel through
 A) Liquid
 B) Gases
 C) Solid
 D) Vacuum
- Q.9** Which graph represent the correct relation between frequency and wavelengths.
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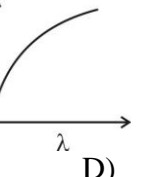
A)



B)



C)

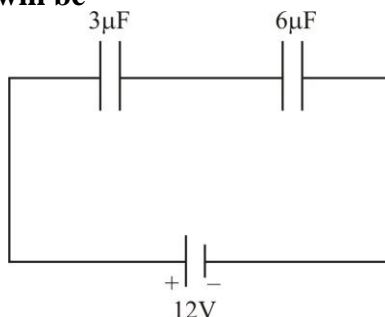
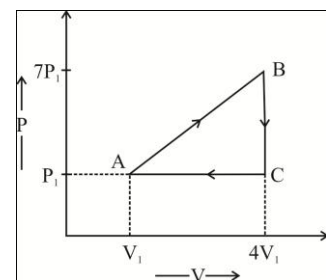
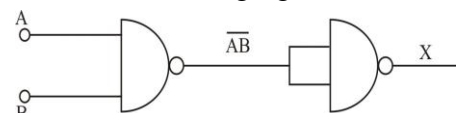


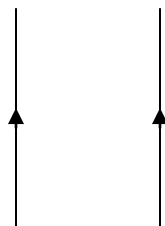
D)
- Q.10** Ratio of the adiabatic modulus of elasticity to isothermal modulus elasticity will be equal to
 A) C_p
 B) C_v
 C) γ
 D) γ^{-1}
- Q.11** The temperature of the medium becomes four times then the speed of sound will be
 A) 4 times
 B) 3 times
 C) 2 times
 D) Remains constant
- Q.12** In YDSE if we increase the frequency the fringe spacing will
 A) Increase
 B) Decrease
 C) Remains and
 D) No effect

PIONEER	JOHAR TOWN	MATRIC	FAISAL TOWN	TOWNSHIP
IQBAL TOWN	NISHTER BLOCK	SODI WAL	GULSHAN RAVI	GULBERG
OUTFALL	RAVI ROAD	SHADMAN	MUGHAL PURA	CHAUBURJI

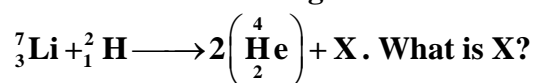
KASUR	GUJRANWALA	GUJRAT	SIALKOT	FAISALABAD	SARGODHA	JHANG
RAWALPINDI	ISLAMABAD	ABBOTTABAD	MIRPUR	PESHAWAR	OKARA	
SAHIWAL	BUREWALA	MULTAN	D.G KHAN	BAHAWALPUR	R.Y KHAN	

- Q.13** In X ray diffraction technique, the crystal act as
 A) Solid
 B) Plate
 C) Diffraction grating
 D) Diffraction
- Q.14** The wavelength of the waves used in the optical fibre is
 A) $1.2 \mu\text{m}$
 B) $1.3 \mu\text{m}$
 C) $1.4 \mu\text{m}$
 D) $1.5 \mu\text{m}$
- Q.15** The far distance of distinct vision of a healthy person is
 A) 25 cm
 B) 100 cm
 C) 25 m
 D) Infinity
- Q.16** The critical angle for glass–air boundary is
 A) 41.8°
 B) 42°
 C) 43°
 D) 44°
- Q.17** A very weak magnetic field produced by Brain is detected by
 A) CRO
 B) ECG
 C) MRI
 D) Squids
- Q.18** MRI stands for
 A) Magnitude response image
 B) Magnetic response image
 C) Magnetic read image
 D) Magnetic resonance imaging
- Q.19** If the first out part is \overline{AB} the “X” will be
 A) \overline{AB}
 B) $\overline{AB}b$
 C) $A+B$
 D) AB
- Q.20** Polonium-218 emits beta particle. The daughter nucleus will be
 A) Radon
 B) Astatine
 C) Protactinium
 D) Thorium
- Q.21** If the value of gas constant is R and Avogadro number is N_A , then value of Boltzmann’s constant “K” can be calculated by formula.
 A) $K = RN_A$
 B) $K = \frac{R}{N_A}$
 C) $K = \frac{N_A}{R}$
 D) None
- Q.22** In a cyclic process shown in figure, the work done by the gas in one cycle is
 A) $28 P_1 V_1$
 B) $18 P_1 V_1$
 C) $14 P_1 V_1$
 D) $9 P_1 V_1$
- Q.23** An ideal gas is heated from 20°C to 40°C under constant pressure. The change in internal energy is
 A) zero under constant pressure
 B) proportional to change in volume
 C) double the original value
 D) proportional to change in temperature
- Q.24** A piece of ice at 0°C is dropped into water at 0°C . The ice will
 A) Melt
 B) Not melt
 C) Becoming to water
 D) Partially melt
- Q.25** The voltage across $3\mu\text{F}$ will be



- Q.26** The resistance of a wire is R . It is stretched uniformly so that its length is doubled
The resistance now becomes
- A) $2R$ C) $R/2$
B) $4R$ D) $R/4$
- Q.27** A resistor connected to a battery is heated due to current through it. Which of the following quantity does not vary?
- A) Resistance C) Resistivity
B) Drift velocity D) No. of free electrons
- Q.28** Magnetic field inside the solenoid is
- A) Infinite C) Uniform
B) Zero D) Non-uniform
- Q.29** The phenomenon of radioactivity is associated with
- A) Decay of nucleus
B) Fusion of nuclei
C) Transmission of radio waves
D) Nuclear reactions caused by cosmic rays
- Q.30** If a charge particle ' q ' is moving parallel to the magnetic field ' B ', then the force acting on it will be
- A) $F = q(v \times B)$ C) $F = qvB$
B) $F = qvB\sin\theta$ D) Zero
- Q.31** The length of a seconds pendulum is ' L ' then the length of a pendulum having a period of one sec is
- A) $L/2$ C) $4L$
B) $2L$ D) $L/4$
- Q.32** A proton beam is moving parallel. The nature of magnetic force between them is
- 
- A) attractive
B) repulsive
C) attractive or repulsive depends upon the magnitude of velocity
D) none of these
- Q.33** A wire of 9 ohms is bent to form an equilateral triangle. The resistance across one of the sides
- A) 2 ohm C) $2/3$ ohm
B) 3 ohm D) $3/2$ ohm
- Q.34** Water is circulated in Coolidge tube to
- A) cool down the target C) cool the cathode
B) cool both cathode and target D) none
- Q.35** What is the effect of electric and magnetic fields on X-rays
- A) X-rays are deflected C) Some time deflected
B) X-rays are not deflected D) Nothing can be said
- Q.36** Cut off wavelength of X-rays coming from a Coolidge tube depends on the
- A) Target material C) Separation between target and filament
B) Accelerating voltage D) Temperature
- Q.37** X-ray region is situated between
- A) Visible and short radio waves C) γ -rays and ultraviolet
B) Ultraviolet and visible D) Short and long radio waves
- Q.38** Isotopes of given element all have the same
- A) Charge / mass ratio C) Nuclear number
B) Neutron number D) Proton number

Q.39 One reaction might be used for controlled nuclear fusion is



- A) α -particle
B) ${}_0^0\text{e}$
C) Neutron
D) Proton

Q.40 If a radioactive sample initially contain N_0 number of atoms, then how many of these nuclei has decayed after a time interval of three half-live

- A) $\frac{N_0}{16}$
B) $\frac{N_0}{8}$
C) $\frac{7N_0}{8}$
D) $\frac{15N_0}{16}$

Q.41 Strontium – 90 (${}^{90}_{38}\text{Sr}$) is radio active and emits β -particle. Which equation is best?

- A) ${}^{90}_{38}\text{Sr} \rightarrow {}^{90}_{39}\text{Sr} + {}^0_{-1}\beta$
B) ${}^{90}_{38}\text{Sr} \rightarrow {}^{90}_{39}\text{Y} + {}^0_{-1}\beta$
C) ${}^{90}_{38}\text{Sr} \rightarrow {}^{90}_{37}\text{Rb} + {}^0_1\beta$
D) ${}^{90}_{38}\text{Sr} \rightarrow {}^{90}_{37}\text{Sr} + {}^0_1\beta$

Q.42 In nuclear physics the quantity minus $\frac{\Delta N}{N \Delta t}$ is known as

- A) Coulomb's constant
B) Gravitational constant
C) Boltzmann's constant
D) Decay constant

Q.43 Dead-time of the Gieger Muller counter

- A) 10^{-4}s
B) 10^{-6}s
C) 10^{-8}s
D) 10^{-10}s

Q.44 Solid state detector is basically:

- A) P-N junction
B) NPN transistor
C) PnP transistor
D) NP-N transistor

CHEMISTRY

Q.45 Total number of fundamental particles in one atom of ${}^{14}_6\text{C}$

- A) 6
B) 8
C) 14
D) 20

Q.46 The percentage of nitrogen in urea is

- A) 46%
B) 38%
C) 56%
D) 40%

Q.47 The pseudo solid is

- A) Rock salt
B) Aluminium nitride
C) Wood
D) Silica

Q.48 Which of following is correct

- A) H_2O boils at 120°C , at 1489 torr
B) H_2O boils at 25°C , at 23.7 torr
C) H_2O boils at 98°C , at 700 torr
D) All of the above

Q.49 The gradual change in the chemical properties in a period is due to

- A) Change in atomic mass
B) Change in no of neutrons
C) Change in electronegativity
D) Change in electronic configuration

Q.50 The maximum number of electrons with clock wise spin that can be accommodated in "N" shell is

- A) 16
B) 32
C) 18
D) 8

Q.51 Which of the following halides is more ionic

- A) AlI_3
B) AlCl_3
C) AlF_3
D) AlBr_3

Q.52 Which of the following molecule has net dipole moment

- A) CO_2
B) PF_5
C) BF_3
D) SO_2

Q.53 In Born Haber cycle for formation of MgO , which process is exothermic:

- A) Ionization energy of $\text{Mg}^+_{(\text{g})}$
B) Electron affinity of $\text{O}^{-1}_{(\text{g})}$
C) Electron affinity of $\text{O}_{(\text{g})}$
D) Enthalpy of atomization of $\text{Mg}_{(\text{s})}$

- Q.54** The enthalpy change for the reaction $2\text{H}_2(\text{g}) + \text{O}_2(\text{g}) \rightarrow 2\text{H}_2\text{O}(\text{g})$ is called
 A) Enthalpy of formation
 B) Enthalpy of neutralization
 C) Enthalpy of reaction
 D) All of these
- Q.55** A solution is obtained by dissolving 12 g of urea in a dm^3 of water. Another solution is obtained by dissolving 68.4 g of cane sugar (mol.wt. 342) in a litre of water at are the same temperature. The elevation of boiling point in the first solution is
 A) Same as that of 2nd solution
 B) Nearly one-fifth of the 2nd solution
 C) Double that of 2nd solution
 D) Nearly five times that of 2nd solution
- Q.56** How many gm of H_2SO_4 is present in 0.25gm mole of H_2SO_4
 A) 0.245
 B) 2.45
 C) 0.25
 D) 24.5
- Q.57** For the electrochemical cell $\text{Mg}/\text{MgCl}_2(1\text{M}) \parallel \text{Fe}_2(\text{SO}_4)_3(1\text{M})/\text{Fe}$, the number of electrons involved in the balanced equation are
 A) 2
 B) 3
 C) 4
 D) 6
- Q.58** Metal that is not deposited at cathode when its aqueous solution is electrolysed
 A) Au^{3+}
 B) Cu^{2+}
 C) Sn^{2+}
 D) Ag^+
- Q.59** Two equilibria are shown below
 Reaction I $2\text{X}_2(\text{g}) + \text{Y}_2(\text{g}) \rightarrow 2\text{X}_2\text{Y}(\text{g})$
 Reaction II $\text{X}_2\text{Y}(\text{g}) \rightarrow \text{X}_2(\text{g}) + \frac{1}{2} \text{Y}_2(\text{g})$
 The numerical value of Kc for reaction I is 2.
 Under the same conditions, what is the numerical value of Kc for reaction II
 A) $1/\sqrt{2}$
 B) $1/4$
 C) $1/2$
 D) -2
- Q.60** $2\text{A} + \text{B} \rightleftharpoons \text{C} + \text{D}$. If at equilibrium 1.0 mol A, 2.0 mol B, 6.0 mol C and 20 mol D are present in a 1.0 dm^3 vessel, then value of the equilibrium constant is
 A) 60
 B) 30
 C) $1/60$
 D) none of these
- Q.61** Following first order reaction is 50% completed in 24 minutes at 300K $2\text{N}_2\text{O}_5 \rightarrow 4\text{NO}_2 + \text{O}_2$ If initial amount of N_2O_5 is 10g, then how many grams of N_2O_5 are converted to product after 72 minutes
 A) 5g
 B) 8.75g
 C) 7.5g
 D) 1.25g
- Q.62** Some reactions are called pseudo-first order reactions. Because
 A) One of the reactant from two does not take part in reaction
 B) Of large conc. one reactant remains dominant in controlling rate of reaction
 C) Changing the concentration of one reactant does not change rate of reaction
 D) Rate constant is changed due to change in conc. of one reactant
- Q.63** Which of the following has maximum ionization potential
 A) Al
 B) P
 C) Mg
 D) Si
- Q.64** A sudden large difference between the values of second and third ionization energies of elements would be associated with which of the following electronic configuration
 A) $1s^2, 2s^2, 2p^6, 3s^4$
 B) $1s^2, 2s^2, 2p^6, 3s^2, 3p^1$
 C) $1s^2, 2s^2, 2p^6, 3s^2$
 D) $1s^2, 2s^2, 2p^6, 3s^2, 3p^2$
- Q.65** Moving down in groups, the binding energy of metals
 A) Decreases
 B) Remains same
 C) Increases
 D) Unpredictable
- Q.66** The one which has greater electrical conductivity
 A) Be
 B) Al
 C) Mg
 D) Li
- Q.67** AgCl dissolves in a solution of NH_3 , but not in water because
 A) NH_3 is a better solvent than water
 B) Ag^+ ions forms complex with NH_3
 C) NH_3 is stronger base than water
 D) Dipole moment of water is higher than NH_3
- Q.68** Typical transition elements show which of the following characteristic properties
 A) Variable oxidation state
 B) Coloured compounds
 C) Formation of complex ions
 D) All of the above

- Q.69** The acid deposition includes wet and dry acidic deposition which does not include
 A) Rain C) Leachates
 B) Fog D) Carbon
- Q.70** The purifying unit in the manufacture of sulphuric acid is used to purify SO_2 from
 A) As C) $\text{Fe}(\text{OH})_3$
 B) As_2O_3 D) All of these
- Q.71** All of the followings are incorrect regarding the manufacture of sulfuric acid except
 A) Drying tower is filled with coke
 B) The contact tower has Fe_2O_3 as catalyst
 C) Testing box is preceded by contact tower
 D) Arsenic oxide present as an impurity acts as activator of the catalyst
- Q.72** One of the raw material, hydrogen in Haber's process is obtained from
 A) Air C) Water
 B) Methane D) Alcohol
- Q.73** The formula of an organic compound having cyclic structure and unsaturated is
 A) C_6H_{12} C) C_5H_{12}
 B) $\text{C}_6\text{H}_6\text{Cl}_6$ D) C_6H_{10}
- Q.74** The IUPAC name of the following compound is
 $(\text{CH}_3)_2\text{-C=CH-CH}_2\text{-C}(\text{CH}_3)_3$
 A) 2, 2, 5-Trimethyl- 4-hexene C) 2, 4-Dimethyl heptene
 B) 2, 5, 5-Trimethyl-2-hexene D) 2, 5-Dimethyl heptene
- Q.75** Which of the following is not ortho and para directing group
 A) OH C) OCH_3
 B) COOH D) NH_2
- Q.76** In the addition of HBr to propene, the first step involves the addition of
 A) Br^- C) Br^-
 B) Br^+ D) H^+
- Q.77** The conversion of ter-Butyl bromide to iso-Butylene is:
 A) $\text{S}_{\text{N}}2$ reaction C) $\text{E}2$ reaction
 B) $\text{S}_{\text{N}}1$ reaction D) $\text{E}1$ reaction
- Q.78** A primary alkyl halide can be converted to alkene by
 A) Dehydration C) Elimination
 B) Substitution D) Addition
- Q.79** Alcohols can be converted into aldehydes and ketones by
 A) Oxidation ($\text{K}_2\text{Cr}_2\text{O}_7 + \text{H}_2\text{SO}_4$) C) Both "A" and "B"
 B) Dehydrogenation (Cu) D) None of these
- Q.80** The products of the fermentation of a sugar are ethanol and
 A) Water C) Carbon dioxide
 B) Oxygen D) Sulfur dioxide
- Q.81** Among the following compounds which can be readily sulphonated
 A) Phenol C) Benzene
 B) Nitrobenzene D) Chlorobenzene
- Q.82** Which of the following cannot be prepared directly from benzene
 A) Cyclohexane C) Benzene sulphonic acid
 B) Phenol D) Toluene
- Q.83** For which one of the following pairs of compounds can the members be distinguished by means of Tollens' test
 A) HCHO and CH_3CHO C) CH_3CHO and CH_3COCH_3
 B) CH_3COCH_3 and $\text{C}_6\text{H}_5\text{COCH}_3$ D) CH_3COCH_3 and $\text{CH}_3\text{CO}_2\text{CH}_3$
- Q.84** For the preparation of CH_3CHO from calcium acetate we need
 A) Calcium acetate only C) Calcium acetate and calcium formate
 B) Calcium formate only D) Two molecules of acetone in aqueous-base
- Q.85** Ketones are oxidized with difficulty under vigorous condition. In case of mixed ketone the C=O group remains during oxidation with
 A) Smaller alkyl group C) Branched chain Alkyl group
 B) Greater alkyl group D) Straight chain Alkyl group
- Q.86** Which of the following acids exhibits similar properties like that of aldehyde
 A) Acetic acid C) Benzoic acid
 B) Formic acid D) Oxalic acid

- Q.87** Alkaline hydrolysis of esters is _____ than acid hydrolysis
 A) Faster C) Equal to
 B) Slower D) None of these
- Q.88** Which of the following formula is more reactive for hydrolysis
 A) -COOR C) -COOH
 B) -CONH₂ D) -COCl
- Q.89** Which is true about enzyme
 A) Protein part of enzyme is called co-factor C) It is non-specific in action
 D) Non-protein part is called apoenzyme D) Many enzymes contain vitamin
- Q.90** Which of the following amino acid has polar R-group
 A) Alanine C) Proline
 B) Cysteine D) Isoleucine
- Q.91** All of the following amino acids are synthesized by human body except
 A) Proline C) Arginine
 B) Valine D) Asparagine
- Q.92** The essential amino acid which contains maximum number of nitrogen atoms
 A) Lysine C) Histidine
 B) Arginine D) Proline
- Q.93** When an alkali is added to zwitter ion, the _____ group releases the _____ and therefore it shows acidic character
 A) COOH, OH⁻ C) NH₃⁺, H⁺
 B) NH₃, H⁺ D) COO⁻, H⁺
- Q.94** The simplest non-polar R-group amino acid which contains at least one optically active carbon centre
 A) Glycine C) Alanine
 B) Valine D) Proline
- Q.95** When two similar or different amino acids condense together they form the linkage
 A) Ester C) Glycosidic
 B) Ether D) Amide
- Q.96** Three dimensional twisting and folding of polypeptide is associated with
 A) Primary structure of proteins C) Tertiary structure of proteins
 B) Secondary structure of proteins D) Quaternary structure of proteins
- Q.97** Which is incorrect statement about nucleic acids
 A) Major function of RNA is protein synthesis C) The sugar present in RNA is ribose
 B) RNA has double helix structure D) Uracil is present in RNA instead of Thiamine
- Q.98** In body, nucleic acids are present as a part of _____
 A) Simple proteins C) Conjugated Proteins
 B) Derived proteins D) Polypeptides
- Q.99** Which of the following is formed through free radical mechanism
 A) Nylon – 6, 6 C) Polyvinyl acetate
 B) Epoxy resins D) Polyester resins
- Q.100** Which of the following enzyme has Zn²⁺ ions as co-factor
 A) Hexokinase C) Chrome oxidase
 B) Phosphatase D) Carbonic anhydrase
- Q.101** The yellow colour in photochemical smog is due to the presence of
 A) NO C) NO₂
 B) N₂O D) N₂O₅
- Q.102** One of the ingredient of water pollution which can cause cancer is
 A) Pesticides C) Nitrogen dioxide
 B) Leather tanneries effluent D) All of these

ENGLISH

Directions: Choose the right option to complete the following sentences.

- Q.103** Since the island soil has been barren for so many years, the natives must now _____ much of their food.
 A) deliver B) import C) utilize D) produce
- Q.104** Anthony's _____ expression masked an essentially cheerful nature.
 A) jubilant B) inevitable C) pert D) dismal
- Q.105** From the _____ tone of his compliments, I guessed that he was not interested in the music.
 A) profound B) perfunctory C) pathetic D) lachrymose

- Q.118** A) She had just turned over the supper steaks when the telephone rang.
 B) She had just turned over the supper steaks when the telephone rung.
 C) She had just turned over the supper steaks when the telephone had rung.
 D) She just turned over the supper steaks when the telephone rang.
- Q.119** A) Horse's anatomy enable them to make use of speed to escape predators and they have a well-developed sense of balance and a strong swim-or-flight instinct.
 B) Horses' anatomy enables them to make use of speed and escape predators and they have a well-developed sense of balance and a strong fight-or-flight instinct.
 C) Horses' anatomy enables them to make use of speed to escape predators and they have a fully-developing sense of balance and strong fight-or-flight instinct.
 D) Horses' anatomy enables him to make then use of speed to escape predators and they have a good-developed sense of balance and a strong fight-or-flight instinct.
- Q.120** A) A regular program of aerobic exercise, such as walking or swimming improve your cholesterol rate and make you feel very healthier.
 B) A regular program of aerobic exercise, such like walking or swimming improves your cholesterol rate and made you fee much healthier.
 C) A regular program of aerobic exercise, such as walking or swimming improves your cholesterol rate and made you feeling much healthier.
 D) A regular program of aerobic exercise, such as walking or swimming improves your cholesterol rate and makes you feel much healthier.
- Q.121** A) The government should accrue taxes for strengthen the economy of the country.
 B) The government should accrue taxes in strengthen the economy of the country.
 C) The government should accrue taxes to strengthen the economy of the country.
 D) The government should accrue taxes by strengthen the economy of the country.
- Q.122** A) My first lesson on forgiveness came from my mother.
 B) My first lesson about forgiveness came from my mother.
 C) My first lesson upon forgiveness came from my mother.
 D) My first lesson in forgiveness came from my mother.

Directions:
 In each of the following question, four alternative meanings of a word are given. You have to select the nearest correct meaning of the given word and fill the appropriate Bubble / Circle on the MCQ Response Form.

- Q.123 ABORIGINAL**
 A) awkward B) arched C) colossus D) indigenous
- Q.124 AMELIORATE**
 A) ambulate B) vacillate C) fabricate D) improve
- Q.125 ABNEGATE**
 A) abstain B) deliberate C) celebrate D) bifurcate
- Q.126 ASKANCE**
 A) Play B) Subterfuge C) Suspiciously D) Expedient
- Q.127 AUDACIOUS**
 A) Daring B) Bantam C) Balk D) Basilica
- Q.128 BARBARIC**
 A) Savage B) Benediction C) Beneficence D) Uncouth
- Q.129 BLASPHEMOUS**
 A) Tavern B) Blandish C) Irreverent D) Furcate
- Q.130 AMENITIES**
 A) adages B) adonis C) aerobics D) conveniences
- Q.131 ABTRUSE**
 A) abstract B) acclimate C) vindicate D) accolade
- Q.132 ASSIMILATE**
 A) Apparel B) Avoirdupois C) Bacchanal D) Absorb

BIOLOGY

- Q.133 Study of movement of blood through different chambers of heart is called:**
 A) Morphology C) Histology
 B) Anatomy D) Physiology
- Q.134 Which of the following is a blood borne disease?**
 A) Hepatitis C) Influenza
 B) Cholera D) Candidiasis
- Q.135 The control of pests has traditionally meant regulation by natural enemies, predators, parasites and pathogens. This type of control is known as:**
 A) Cultural control C) Pesticide control
 B) Biological control D) Insecticide control
- Q.136 Study of distribution of different species occupying different geographical areas is called:**
 A) Ecology C) Biogeography
 B) Evolution D) Genetics
- Q.137 Which of the following organelles are exclusively present in plant cells?**
 A) Lysosomes C) Glyoxisomes
 B) Ribosomes D) Peroxisomes
- Q.138 Which of the following organelles are involved in ATP synthesis by oxidative phosphorylation:**
 A) Golgi bodies C) Ribosomes
 B) Mitochondria D) Chloroplast
- Q.139 Which of the followings type of cell division exclusively present in diploid cells?**
 A) Mitosis C) Nuclear mitosis
 B) Meiosis D) Binary fission
- Q.140 Which of the following condition arises due to non-dysjunction of autosomes?**
 A) Turner's syndrome C) Mongolism
 B) Klinefelter's syndrome D) Jacob's syndrome
- Q.141 In which phase of the cell cycle, the metabolic activity of the nucleus is high?**
 A) Mitosis C) Meiosis
 B) Interphase D) G0 phase
- Q.142 Which of the followings is/are not characters of cancer cell?**
 A) Large and prominent nuclei C) High cytoplasm to nucleus ratio
 B) Rapidly dividing cells D) Less differentiated cells
- Q.143 Which of the following pairs of structures present in both prokaryotic and eukaryotic cells?**
 A) DNA and Cytoplasm C) Cytochrome and plasma membrane
 B) RNA and Ribosomes D) All of these
- Q.144 In Which of the following phase of meiosis primary oocyte is arrested at the time of birth:**
 A) Prophase I C) Prophase II
 B) Metaphase II D) Pachytene
- Q.145 In which of the following type of transport across plasma membrane ATP molecule may utilize:**
 A) Active transport C) Diffusion
 B) Passive transport D) Osmosis
- Q.146 Separation of sister chromatids start during:**
 A) Metaphase I C) Metaphase II
 B) Anaphase I D) Anaphase II
- Q.147 The bond formed between glucose and fructose to form sucrose is:**
 A) 1,4 glycosidic linkage C) 1,6 glycosidic linkage
 B) 1,2 glycosidic linkage D) 1,3 glycosidic linkage
- Q.148 Which of the following is not function of proteins?**
 A) Component of cellular membranes C) Defend the body against foreign pathogens
 B) Transport of oxygen, lipids and metal ions D) Primary source of energy

- Q.149** How much solar energy will be required for the synthesis of 1g of glucose?
 A) 717.6 J
 B) 71.76 J
 C) 71.76 Kcal
 D) 717.6 Kcal
- Q.150** Composition of phosphatidic acid is:
 A) 1 glycerol, 1 phosphoric acid and 1 fatty acid
 B) 1 glycerol, 1 phosphoric acid and 2 fatty acid
 C) 3 glycerol, 1 phosphoric acid and 1 fatty acid
 D) 3 glycerol, 1 phosphoric acid and 3 fatty acid
- Q.151** A protein with 100 amino acids is encoded by:
 A) 1000 nucleotides
 B) 3000 nucleotides
 C) 300 nucleotides
 D) 100 nucleotides
- Q.152** If Adenine is present 20% in DNA then concentration of Pyrimidine in DNA would be:
 A) 80%
 B) 20%
 C) 50%
 D) 70%
- Q.153** An enzyme is working above its optimum temperature then slight decrease in temperature will:
 A) Decrease rate of reaction
 B) Increase rate of reaction
 C) Will not effect on rate of reaction
 D) Reaction rate will decrease on arrival optimum temperature
- Q.154** Which of the following organic cofactor binds with enzyme covalently?
 A) Activator
 B) Prosthetic Group
 C) Coenzyme
 D) Holoenzyme
- Q.155** pH of Arginase is:
 A) 2
 B) 4.5
 C) 9.7
 D) 7.6
- Q.156** The structure which contain the gene for drug resistance in bacteria are:
 A) Nucleoids
 B) Mesosomes
 C) Chromatin bodies
 D) Plasmids
- Q.157** Antibiotics that kill microbes immediately are called:
 A) Microbistatic
 B) Microbicidal
 C) Biostatic
 D) Chemotheurapeutic
- Q.158** Which of the following is not present in HIV virus?
 A) Proteins
 B) RNA
 C) DNA
 D) Lipids
- Q.159** Lovastatin is use to:
 A) Lowering blood glucose level
 B) In treatment of migraine
 C) Transplant rejection
 D) Lowering blood cholesterol
- Q.160** Which of the following is not true about nematodes?
 A) Coelomate
 B) Round worms
 C) Endoparasites
 D) Bilateral symmetry
- Q.161** This insect can be economically beneficial to humans:
 A) Mosquito
 B) Tse-tse fly
 C) Honey bee
 D) Locust
- Q.162** Endosperm is formed as a result of:
 A) Pollination
 B) Self pollination
 C) Double fertilization
 D) Cross pollination
- Q.163** Which of the following family is main source of food for man?
 A) Family solanaceae
 B) Family fabaceae
 C) Family poaceae
 D) family mimosaceae
- Q.164** Potato belongs to:
 A) Family solanaceae
 B) Family fabaceae
 C) Family poaceae
 D) Family mimosaceae
- Q.165** Digestion of which component of food in our alimentary canal starts from intestine:
 A) Proteins
 B) Lipids
 C) Carbohydrates
 D) Vitamins

Q.166 Digestion of proteins in stomach takes place in:

- | | |
|---------------------------|--------------------|
| A) Slightly acidic medium | C) Alkaline medium |
| B) Highly acidic medium | D) Neutral medium |

Q.167 Absorption of food takes place from:

- | | |
|-------------|-----------|
| A) Duodenum | C) Ileum |
| B) Jejunum | D) Caecum |

Q.168 Sublingual glands release:

- | | |
|----------------------|-----------------------------|
| A) Water and mucus | C) Water, ptyalin and salts |
| B) Water and Ptyalin | D) Mucus, ptyalin and salts |

Q.169 Space of chest cavity increases due to:

- | | |
|-----------------------------|-------------------------------|
| A) Contraction of diaphragm | C) Relaxation of intercostals |
| B) Relaxation of diaphragm | D) Contraction of trachea |

Q.170 When temperature of body increases then affinity of hemoglobin to bind with oxygen:

- | | |
|-------------|-------------------------------------|
| A) Decrease | C) Remains constant |
| B) Increase | D) Initially decrease then increase |

Q.171 During ventricular systole:

- | | |
|----------------------------------|----------------------------|
| A) Atrioventricular valves open | C) Semilunar valves close |
| B) Atrioventricular valves close | D) All valves will be open |

Q.172 95% of cytoplasm of RBCs contains a protein called:

- | | |
|----------------|---------------|
| A) Myoglobin | C) Antibodies |
| B) Haemoglobin | D) Albumin |

Q.173 Type of kidney stone having highest incidence rate is:

- | | |
|----------------------|----------------|
| A) Calcium oxalate | C) Uric acid |
| B) Calcium phosphate | D) Cholesterol |

Q.174 Maximum reabsorption of water from glomerular filtrate occurs at:

- | | |
|-------------------------------|-----------------------------|
| A) Proximal convoluted tubule | C) Distal convoluted tubule |
| B) Loop of Henle | D) Collecting duct |

Q.175 Homeostasis refers:

- | | |
|-----------------------------|----------------------|
| A) Normal body physiology | C) Sick condition |
| B) Abnormal body physiology | D) Shrinkage of cell |

Q.176 All substances are filtered through glomerulus except:

- | | |
|----------|-------------|
| A) Water | C) Proteins |
| B) Salts | D) Glucose |

Q.177 Antidiuretic hormone helps in reabsorption of water by changing permeability of:

- | | |
|--------------------|----------------------|
| A) Proximal tubule | C) Collecting tubule |
| B) Distal tubule | D) Loop of Henle |

Q.178 Which structures respond when they are stimulated by impulse coming through motor neuron?

- | | |
|--------------|----------------|
| A) Receptors | C) Effectors |
| B) Responses | D) Transducers |

Q.179 Over-activity of sympathetic nervous system causes:

- | | |
|--------------------------|-------------------------------|
| A) Disturbance of vision | C) Decrease in blood pressure |
| B) Constipation | D) Increase in heart rate |

Q.180 Speed of nerve impulse is greatest in:

- | | |
|--------------------------|------------------------|
| A) Myelinated neuron | C) Neuroglia |
| B) Non-myelinated neuron | D) All have same speed |

Q.181 Part of neuron that transfers impulses to muscle fibres for contraction:

- | | |
|-------------|--------------|
| A) Dendrite | C) Cell body |
| B) Axon | D) Dendron |

Q.182 It is measurement of electrical activity of brain:

- | | |
|--------|--------|
| A) ECG | C) EMG |
| B) EEG | D) MRI |

Q.183 One spermatid differentiates into:

- | | |
|--------------|------------|
| A) One sperm | C) 3 Sperm |
| B) Two sperm | D) 4 Sperm |

Q.184 Breakdown of endometrium during menstruation is due to:

- | | |
|--------------------------------------|--------------------------------------|
| A) Increase in level of LH | C) Increase in level of progesterone |
| B) Decrease in level of progesterone | D) Increase in level of estrogen |

- Q.185** How many secondary oocyte ovulate from a non-pregnant human female in six month normally?
 A) 6
 B) 12
 C) 4
 D) 10
- Q.186** Leutinizing hormone triggers:
 A) Cessation of oogenesis
 B) Breakdown of oocyte
 C) Ovulation
 D) Development of zygote
- Q.187** Which of the followings hormone is/are responsible to vascularize endometrium?
 A) FSH
 B) LH
 C) Estrogen
 D) Testosterone
- Q.188** Total number of paired bones in skull is:
 A) 6
 B) 8
 C) 10
 D) 12
- Q.189** A tendon is:
 A) Muscular tissue
 B) Elastic tissue
 C) Inelastic tissue
 D) Cartilaginous tissue
- Q.190** Tongue contains:
 A) Smooth muscles
 B) Cardiac muscles
 C) Skeletal muscles
 D) All of these
- Q.191** Some part of _____ may be modified to form distinct ligament:
 A) Corpus Luteum
 B) Fibrous Capsule
 C) Annulus Fibrosis
 D) Nucleus Pulpous
- Q.192** Type of muscle cell that is always multinucleated:
 A) Smooth
 B) Skeletal
 C) Cardiac
 D) Visceral
- Q.193** Overproduction of which hormone can cause kidney stone formation:
 A) Calcitonin
 B) Parathormone
 C) Aldosterone
 D) Oxytocin
- Q.194** Neurosecretory cells which produce hormones are present in which part of brain:
 A) Hypothalamus
 B) Hindbrain
 C) Pons
 D) Cerebellum
- Q.195** A hormone that increases blood glucose level by breaking down proteins is:
 A) Insulin
 B) Glucagon
 C) Cortisol
 D) Adrenalin
- Q.196** A hormone that causes milk ejection from mammary glands:
 A) Prolactin
 B) Lactogen
 C) Oxytocin
 D) Estrogen
- Q.197** Secretion of adrenal medulla is direct under the control of:
 A) ACTH
 B) Brain
 C) Sympathetic nervous system
 D) Somatic nervous system
- Q.198** Which of the following is the main component of immune system?
 A) Neutrophils
 B) Eosinophils
 C) Basophils
 D) Lymphocytes
- Q.199** An injection of dead virus or bacteria to initiate specific immune response is called:
 A) Active immunity
 B) Cell mediated immunity
 C) Humoral immunity
 D) Passive immunity
- Q.200** Antibodies are synthesized in response to infection of:
 A) Bacteria
 B) Viruses
 C) Toxins
 D) All A,B,C
- Q.201** Properties of immune system include:
 A) Defense against pathogens
 B) Neutralization of toxins
 C) Memory of the antigen
 D) All A,B,C
- Q.202** It is not lymphoid organ:
 A) Tonsils
 B) Lymphocyte
 C) Adenoids
 D) Thymus
- Q.203** ETC is located on:
 A) Smooth membrane of mitochondria
 B) Outer Membrane of Chloroplast
 C) Membrane of ribosomes
 D) Cristae of mitochondria

- Q.204 Which of the followings is two carbon compounds:**
 A) Oxaloacetate
 B) Citrate
 C) Glyceraldehyde
 D) Acetate
- Q.205 How many pyrrol rings are present in one molecule of chlorophyll?**
 A) 4
 B) 2
 C) 1
 D) 3
- Q.206 Oxidative decarboxylation occurs when:**
 A) Citrate changes to isocitrate
 B) Fumarate into malate
 C) α -ketogutarate to succinate
 D) Succinate to fumarate
- Q.207 It is a respiratory protein present in all aerobic organisms:**
 A) Cytochrome b
 B) Cytochrome c
 C) Cytochrome a
 D) Cytochrome a_3
- Q.208 Plasmid and foreign gene combine to form:**
 A) Recombinant DNA
 B) Transgenic DNA
 C) Ribosomal DNA
 D) Chromosomal DNA
- Q.209 The bacterial cells are more permeable to take up recombinant plasmid if they are treated with:**
 A) Calcium chloride
 B) Calcium carbonate
 C) Calcium sulphate
 D) Cesium chloride
- Q.210 Study of gene sequencing and DNA analysis comes under:**
 A) Genetics
 B) Inheritance
 C) Biotechnology
 D) Molecular genetics
- Q.211 TAQ polymerase is:**
 A) RNA polymerase
 B) DNA polymerase
 C) Thermo-sensitive
 D) Thermo-unstable
- Q.212 Bacteriophages are used as vectors to introduce gene into:**
 A) Virus
 B) Bacteria
 C) Plant
 D) Animal
- Q.213 It is a type of interaction in which one organism is benefited and other is harmed:**
 A) Parasitism
 B) Commensalism
 C) Mutualism
 D) Symbiosis
- Q.214 A food chain having _____ trophic levels will be more stable:**
 A) 3
 B) 5
 C) 4
 D) 6
- Q.215 Change in community structure of an ecosystem over a period of time is called:**
 A) Succession
 B) Progression
 C) Evolution
 D) Mutation
- Q.216 Which of the followings is biotic components?**
 A) Humus
 B) Scavenger
 C) Land
 D) Gravity
- Q.217 Who proposed idea of evolution first time with evidences?**
 A) Linnaeus
 B) Aristotle
 C) Malthus
 D) Darwin
- Q.218 Natural selection directly acts on:**
 A) Phenotype
 B) Genotype
 C) Serotype
 D) Karyotype
- Q.219 Sum of all the genes present in breeding population is called:**
 A) Genotype
 B) Gene pool
 C) Genome
 D) Phenotype
- Q.220 Theory of inheritance of acquired characters was proposed by:**
 A) Aristotle
 B) Lamarck
 C) Darwin
 D) Wallace